FORT CARSON 25-YEAR SUSTAINABILITY GOAL PLAN
GOAL: SUSTAINABLE TRANSPORTATION (ST)

Goal Statement:
Reduce automobile dependency and provide balanced land use and transportation systems.

Long Term Vision
The final wording of the transportation goal established at the 2002 Fort Carson Sustainability Conference is ***Reduce automobile dependency and provide balanced land use and transportation systems.*** Desired end states related to sustainable transportation and land use included:

- Increased use of mass transit with clean fuels.
- Schedules that reduce vehicle emissions.
- Innovative materials and placement that provides sustainable transportation systems.
- Reduction of average daily commute miles.
- Regional partnerships for alternative and multiple occupancy vehicles.
- Reduce the amount of vehicles on the roadway to reduce congestion.
- Control urban expansion and zone to discourage vehicle use.

Ownership and Involvement (Resources, Roles and Authority)

Goal Proponent: DOL Director

Goal Lead & Fort Carson Partners:

- Directorate of Logistics/Transportation Motor Pool (DOL/TMP)
- Directorate of Public Works (DPW)
- Disability Evaluation System (DES) (Physical Security, Project Management Office)
- Mission Support Element (MSE)
- Army and Air Force Exchange Service (AAFES)
- Defense Commissary Agency (DECA)
- Medical Department Activity (MEDDAC)
- Directorate of Family Morale, Welfare, and Recreation (DFMWR)
- 4th Infantry Division (ID) (Tasking/Borrowed Military Manpower for Shuttle Operations)
- United States Army Garrison (USAG) Replacement Detachment (Shuttle Command & Control)

Off-post Partners:

- Pikes Peak Area Council of Governments (PPACG) / Pikes Peak Regional Transit
    - Authority (PPRTA)
- City of Colorado Springs / Mountain Metro Transit / Metro Rides
- Southern Colorado Clean Cities Coalition
- Green Cities Coalition
- Pikes Peak Area Bikeways Coalition / Bicycle Colorado
- Silver Key
- Community Intersections
- Pikes Peak Partnership (Amblicab)
- City of Fountain Transit Services
- El Paso County
- Pueblo County
- Pikes Peak Mobility Coalition

- Other Federal, state and local transportation-related agencies
    - General Services Administration (GSA)
    - Department of Transportation (DOT)
    - Colorado Department of Transportation (CDOT)
    - Environmental Protection Agency (EPA)
    - Etc.
- Various private transit service providers including Enterprise (car-sharing and vanpooling), VPSI (vanpooling) and more

Significant Sustainability Aspects and Impacts

1. Water quality related to vehicle and equipment maintenance; storm water runoff; water treatment

2. Air emissions related to vehicle maintenance; vehicle emissions; POV commute; and fuel use (JP8, biodiesel, gasoline)

3. Transportation related to tactical and non-tactical vehicle use; transport of equipment; long-haul trucking; and hauling of waste and recycling; non-tactical vehicle use; commuting

4. Land use related to new or existing infrastructure (roads and buildings); and POL use

5. Cost/Budget salary expenditures to public and private entities; fuel cost for vehicles and aircrafts; and total cost

6. Energy related to fuel use; vehicle and equipment maintenance (refueling; fuel for tactical vehicles; fuel spills)

Legal and Other Requirements (including other ISP goal plans)

- EO 13423, Strengthening Federal Environmental, Energy and Transportation Management, January 2007
- EO 13514, Federal Leadership in Environmental, Energy and Economic Performance, October 2009
- Energy Policy Act (EPACT) 2005
- Energy Independence and Security Act (EISA) 2007
- DOD Telework Policy 2012
- DOD Strategic Sustainability Plan 2011
- Army Strategy for the Environment 2004
- Army Net Zero Initiative 2011
- Federal, state and local statutes and regulations and other requirements to which the Army and Fort Carson subscribes
- ISP Energy & Water Goal
- ISP Air Quality Goal
- ISP Sustainable Development Goal

Alignment with Army Strategy

The Army Strategy for the Environment: Sustain the Mission – Secure the Future establishes a long-range vision that enables the Army to meet its mission today and into the future. The

strategy commits Army leaders at all levels to certain goals and challenges them to develop innovative methods to achieve them. The Fort Carson Sustainability Program was created as a means to facilitate this mission by establishing goals and the policies, plans and procedures needed to attain those goals. The Fort Carson Sustainability Plan operationalizes the Army's strategy by providing the structure for planning, implementation, and monitoring and measuring progress.

The IMCOM Campaign Plan provides for Sustainable Installations, Energy and Water Efficiency and Security, and Assessment and Sustainment of Essential Base Operations Services in the Installation Readiness Lines of Effort (LOE). The Sustainability Objectives and Targets associated with this goal support all LOE in the IMCOM Campaign, with particular emphasis on accomplishing the Installation Readiness LOE.

Background

Numerous policies at the federal, state, and local government levels, plus DoD and DA policies aim to achieve more sustainable transportation systems in the US. Goals include reducing America's dependence on foreign oil, reducing environmental impacts of energy sources used in transportation, reducing safety hazards of transportation and reducing transportation system congestion for both people and freight.

Achieving sustainable transportation depends on long-term planning of land uses, transportation technologies and systems, and the local availability of sustainable fuel sources. Primary human aspects are safety, convenience (time and comfort), cost and equitable access of all people that Fort Carson serves to its services.

Given the Net Zero Energy initiative for 2020, it is imperative that the 2027 goal to 'reduce SOV non-mission trips' (ST1) be accelerated to match. As electric vehicles (EVs) are added to the fleet, the grid impact has the potential to be dramatic, and correlative SOV reductions will help to offset this electricity demand and improve the likelihood of achieving Net Zero Energy. Moreover, two-way capable EVs on the grid have enormous potential improving the viability and reliability of solar and other renewable energy sources, thus further improving Fort Carson's Net Zero Energy potential. This acceleration requires a reassessment of priorities and timelines for various strategies, as well as a recommitment from of Fort Carson to sustainable transportation practices.

This goal focuses on the performance of the transportation system, and objectives concerning the sustainability performance of the system including unregulated carbon dioxide emissions. The revised sustainable transportation plan expands upon the original goals set forth in 2002 (25-year objectives) And includes 2020 targets to align with Net Zero in addition to longer range planning.

Desired end states related to sustainable transportation and land use from the Sept 2002 conference are as follows:

- Increased use of mass transit with clean fuels.
- Schedules that reduce vehicle emissions.
- Innovative materials and placement that provides sustainable transportation systems.
- Reduction of average daily commute miles.
- Regional partnerships for alternative and multiple occupancy vehicles.
- Reduce the amount of vehicles on the roadway to reduce congestion.
- Control urban expansion and zone to discourage vehicle use.

This goal addresses vehicle use as a detriment to quality of life. More time spent in vehicles due to congestion or long commutes typically equates to less time spent with families or other important personal pursuits. Furthermore, with increased security, the more vehicles coming into the gates, the more congestion is created, and the more time is spent in vehicles. This goal seeks to reduce the negative impacts on quality of life from transportation systems in and around Fort Carson's operations.

The vision is to achieve a sustainable Post transportation system integrated with regional and state transportation systems. A sustainable Post transportation system is characterized by:

- Maximized efficiency of energy used for transportation and efficiency of time spent moving people or materials
- Maximized use of sustainable energy sources for transportation, in particular local or US fuel sources
- Maximized integration with regional and state transportation systems that promote sustainability performance and transportation user quality of life
- Maximized transportation convenience for mission needs including rapid deployment and freight mobility
- Maximized integration with land-use planning for Post lands and surrounding communities
- Minimized adverse air emissions from transportation sources
- Maximum compliance with US government, State of Colorado, Pikes Peak region and other relevant transportation goals, policies or regulations recognized by the US Army or Department of Defense

This goal is wholly focused on non-combat (non-mission or non-tactical) transportation operations at Fort Carson. However, the Federal, state and other goals cited above cover mission/combat operations unless they are specifically excluded. An important finding of the Army Environmental Policy Institute, responding to recommendations to reduce vehicle fuel use related to contingency operations, is that a Stryker Brigade Combat Team in a contingency operation has a fully burdened cost of $13.13 per gallon of fuel. This figure includes monetized costs only; a fully-burdened per gallon cost that includes externalized sustainability impacts of fuels may further help Fort Carson's operations achieve sustainable transportation cost savings and reduced impacts.

Challenges & Barriers

A. Ninety-four percent of Fort Carson commuters drive alone to work. We have remained at the 93%-94% level since the first counts were made in 2005, which is a reflection of the percentage of solo drivers within the Pikes Peak region as a whole. The initial targets aiming to achieve a 25% reduction in SOVs entering the post by 2012 and a 40% reduction by 2027 (or now 2020) seem to be too ambitious given our national car culture and local circumstances. Substantial commuter incentives, parking fees and/or multi-million dollar investments in alternative mobility infrastructure such as driverless vehicles or personal rapid transit which could help reach the targets are largely unsupported at this time. The current commuting travel times, level of traffic congestion, and land development patterns do not encourage alternatives to solo driving. City transit services do not currently enter the post, creating a "last mile" challenge for riders trying to get to work at Fort Carson. Army tradition and guidelines for conducting Soldier physical training and limiting shuttle/bus services also present barriers. While Fort Carson promotes or makes available some alternatives to driving alone, such as walking, bicycling and ridesharing, they are not sufficiently robust to alter commuter behavior or reduce commuter traffic significantly at this time. Because of these challenges and unknowns, we have

modified our targets for 2017 and 2020. They are still considered to be far-reaching enough to drive technological innovation and behavioral change, but yet realistic enough to be achievable.

B. From the 2002 Conference:
   - Limited technology
   - Regulatory conflicts
   - Equipment

C. From the 2003 5-Year Plan:
   - Perception of independence and status of automobile
   - City bus system does not currently support Fort Carson's needs
   - On-post shuttle service not used (scheduling/awareness)
   - Rideshare forms not allowed in The Mountaineer
   - Current infrastructure supports single occupancy vehicles (parking, building distances from each other and from services)
   - Rapidly changing technologies
   - High startup costs for mass transit
   - Legal challenges (currently illegal to fund commuting to and from work and for personal trips)
   - Many people are afraid to walk, bicycle, or take public transportation
   - In many cases it is easier to take a personally-owned vehicle (POV)

D. From the 2011 Net Zero designation
   - Penetration of EVs may have a counterproductive impact on Net Zero Energy goal to reduce electricity consumption
   - Increased focus on Net Zero may impact funding for sustainability projects viewed as ancillary

E. Other Challenges and Barriers
   - Unifying existing but divergent bikesharing, carpooling, vanpooling options on post
   - Limited ability to impact technology development (in particular the types of vehicle technologies available through GSA)
   - Getting in place policies and agreements to connect on and off-post transportation systems

Training, Education, and Outreach

- General sustainability awareness training
- Competence training related to goal requirements
- Energy Conservation Officer Training
- Environmental Protection Officer Training

Communication

- External (Coordinated with PAO and aligned with Installation strategic communication strategies)
  - Fort Carson Growth Planning Partnership Groups and implementation of transportation-related initiatives
  - Collaboration with regional transportation agencies in long-range transportation planning public forums
  - Community Town Hall forums, discussions and meetings
  - News releases relative to transportation infrastructure and operational changes
- Internal
  - Publications, news releases, supply flashers, town halls and other mechanisms to communicate traffic demand management and other transportation related activities.
  - Signs specific to transportation, e.g. car pool only parking signs or alternate route selection eSignage
  - Sustainable transportation system marketing

Document Control

- Bicycle and Pedestrian Plan (DPW)
- Transportation Plan (DPW)
- Sustainable Transportation Plan (ISRO)
- Transit Plan (ISRO)
- Transportation Motor Pool SOP/Logs (DOL/TMP)
- Air Permit(s) (DPW/DOL)
- Shuttle Routes (ISRO)

Operational Controls

- Signs (DPW/DES)
- TMP contract (DOL)
- TMP SOP (DOL/TMP)
- TMP Logbook (DOL/TMP)
- GSA credit card (DOL/TMP/GSA)

Monitoring & Measurement

- Transportation Motor Pool Alternate Fuel Vehicle (GSA) Statistics (DOL)
- Fuel Delivery/Usage Data (DOL)
- GSA Vehicle Usage (GSA)DOL
- Fuel Efficiency (GSA/DOL/ISRO)
- Gate Counts (DPW)
- Fuel Usage, TMP Vehicles (GSA)DOL
- Air Permit Monitoring (DOL/DPW)
- Shuttle Ridership (ISRO)

Evaluation of Compliance

- TMP Monthly Dispatch Review (DOL/TMP)
- GSA Monthly Vehicle/Fuel Usage (GSA)
- GSA Vehicle Usage at least annually (DOL)
- Nonconformity
    - IPAN and CPAN locations

Control of Records

- TMP dispatch receipts (DOL/TMP)
- GSA reports (GSA/DOL/TMP)
- TMP contract reports (DOL)

Annual Review

- Non-Tactical Vehicle Review Board (DOL/TMP/GC)
- Air emissions (DPW/DOL)

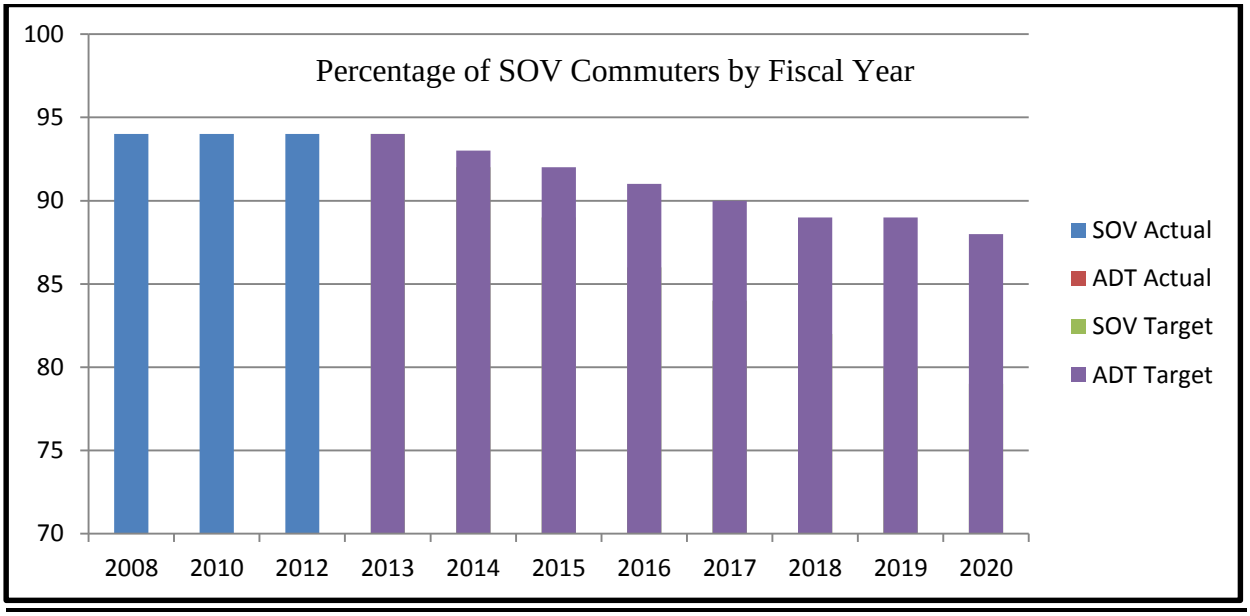
Goal Objectives and Targets

Objective ST1: By 2020, (1) Reduce peak hour Single Occupant Vehicle (SOV) commuter trips by 15% and (2) Reduce annual average daily total (ADT) by 15%

Target by FY15: (1) Peak hour SOV commuter trips reduced 5%; and (2) AADT reduced by 2%

Target by FY17: (1) Peak hour SOV commuter trips reduced 10%; and (2) AADT reduced by 4%

Target by FY20: (1) Peak hour SOV commuter trips reduced 15%; and (2) AADT reduced by 6%



Details on Measure for ST1

Measure: (1) # of single occupancy vehicles compared to the total # of vehicles entering Fort Carson gates during peak hour; and (2) total # of vehicles entering Fort Carson gates averaged over a 24 hr period

Scope: The measure includes inbound commuter vehicles entering through Fort Carson gates during annual counts performed under the direction of the Transportation Engineer. The peak hour or the busiest time for commuting occurs during work days between 0515 and 0615. The annual average daily total (AADT) is generated based on vehicle counts completed for at least three work days during the course of a year at all entry gates and the post population at the time. The normalized population figure will take into account the assigned Soldier and civilian population at the time minus deployments of a brigade or equivalent number of Soldiers.

Source: DPW Transportation Engineer

Baseline: None; the percentage is a calculation based on vehicle counts completed within a specified period (peak hour or 24 hour).

Limitations: Motorcycles, scooters, bicycles, contractor, construction and tactical vehicles are excluded from the SOV counts. The numbers of SOV are not counted at all gates at the same times (day/week/time). Traffic counters for calculating AADT record all vehicles regardless of type entering the gate. For both measures, vehicles are counted one time per year at entry gates.

Verification & Validation: DPW Transportation Engineer; local/regional statistics as determined by the Pikes Peak Area Council of Governments.

Comments: The targeted reductions are based on projections made in the Comprehensive Transportation Study 2012 Update (Original Study 2005) by Gannett Fleming under contract to Military Surface Deployment and Distribution Command, Transportation Engineering Agency and that 94% of commuters drove alone to Fort Carson in 2011 (based on Fort Carson gate counts and regional statistics) and still do in 2012/2013. The aim is to achieve subsequent reductions of 15% during peak hour and 6% for the annual average daily total by 2020. However, even if the targeted reductions are met, the growing population and limited on post residential housing will result in an overall increase in the number of vehicles seeking entry from outside Fort Carson.

Initiatives in support of Objective ST1 FY13/14/15

ST1.1 Implement objectives ST2 (Rideshare Alternatives and Promotion), ST3 (Commuting by Bike and Walking), ST4 (Bicycle Sharing), ST5 (Transit Priority – High Occupancy Vehicle - Gates and Lanes) and ST9 (Commuter Express Bus Service/On Post Shuttle) as outlined in the proposed Fort Carson Sustainable Transportation Plan (12 Jan 2012)

ST1.2 Prioritize ST10 (Long Range Plans) in the proposed Fort Carson Sustainable Transportation Plan (12 Jan 2012) as they relate to SOV reductions, and develop a 5-year roadmap for implementation based on funding and in concert with existing sustainable transportation initiatives.

ST1.3 Prioritize ST11 (Emerging Ideas) in the proposed Fort Carson Sustainable Transportation Plan (12 Jan 2012) as they relate to SOV reductions, and develop a 20-year roadmap to study feasibility, identifying funding streams, and bring them to fruition.

ST1.4 Track statistics on teleworking (# teleworking at least one day per week compared to # eligible for teleworking). (EEO, ISRO)

ST1.5 Provide commuter information for Scope 3 (commuters) greenhouse gas (GHG) emissions tracking and coordinate with the Air Quality goal lead to implement measures to reduce scope 3 GHG.

ST1.6 Emphasize Command direction and incentives for ride sharing.

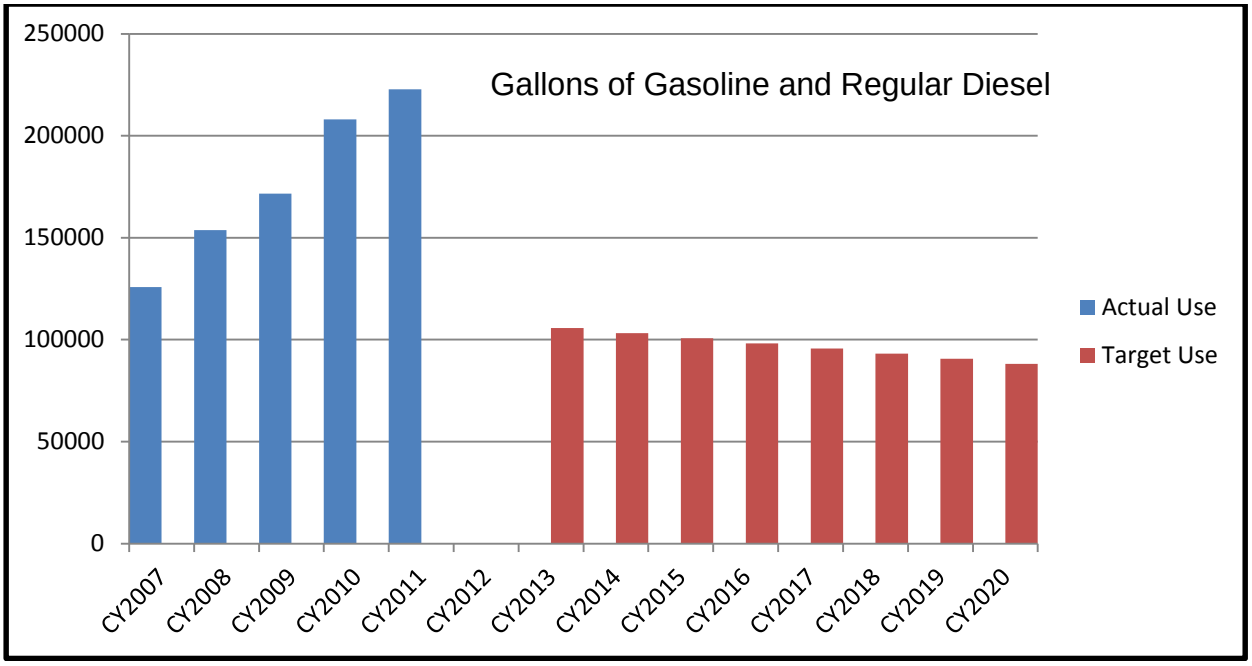
Participants involved: Sustainable Fort Carson, DPW, DOL, DES, El Paso County, IMCOM, PPACG, local/regional planning agencies, Mountain Metro and/or other transit services, Metro Rides, other governmental and non-governmental agencies, contracted service providers.

Objective ST2: Reduce the use of petroleum products by the non-tactical vehicle fleet 30% by FY2020 using a CY2007 baseline

Target by FY15: Reduce petroleum usage by 20% compared to CY2007

Target by FY17: Reduce petroleum usage by 24% compared to CY2007

Target by FY20: Reduce petroleum usage by 30% compared to CY2007



Details on Measure for ST2 (See also ST3)

Measure: Gallons of petroleum fuel consumed per year compared to the Calendar Year (CY) 2007 baseline

Scope: The measure includes all non-renewable petroleum (gasoline and regular diesel) used in the non-tactical vehicle fleet

Source: DOL

Baseline: CY 2007 (The EO 13514 requires federal agencies to reduce petroleum use by 2% per year based on 2005 levels; the DOD target is 30% reduction by 2020.)

Limitations: A few organizations may acquire relatively small amounts of petroleum fuels that may not be accounted for by the DOL and/or the data from such purchases may not be readily available.

Verification & Validation: DOL verifies and validates fuel used thru GSA and bulk fuel usage.

Comments: The post assigned population increased from approximately15,000 to 24,000 by 2012. 46% of NTV (169 vehicles) were parked and/or returned to GSA in CY 2012 as a cost-cutting measure.

Number Of Vehicles In The NTV Fleet At The End Of The Calendar Year

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
445	455	488	540	584									

Initiatives in support of Obj. ST2 FY13/14/15

ST2.1 Request and analyze annual GSA and DOL fuel usage reports. (ISRO, DOL)

ST2.2 Continue to optimize the fleet based on headquarter directives, population and organizational NTV requirements. (DOL/TMP)

ST2.3 Maximize the use of alternative fuels in dual-fueled vehicles. (DOL)

ST2.3 Promote the acquisition of renewable fuel alternatives such as ethanol and biodiesel. (ISRO, Clean Cities)

ST2.4 Market bicycling, walking and other non-motorized forms of transportation continuously in order to decrease the total number of vehicles required from GSA. (ISRO, DOL)

ST2.5 Implement/Continue Fort Carson shuttle in lieu of organizationally assigned non-tactical vehicles and use alternative fueled vehicles when possible. (ISRO, DOL)

ST2.6 Encourage drivers to consolidate trips; eliminate trips; use the shuttle; improve scheduling and routing; maintain vehicles for fuel economy; drive more efficiently; and avoid excessive or unnecessary idling. (ISRO, DOL)

ST 2.7 Implement objectives ST1 (Anti Idling Program), ST2 (Rideshare Alternatives and Promotion), ST3 (Commuting by Bike and Walking), ST4 (Bicycle Sharing System), ST6 (Electric Vehicles and Alternative Fuels Infrastructure), ST7 (Transit Solutions Team), and ST9 (Commuter Express Bus Service/On Post Shuttle) as outlined in the proposed Fort Carson Sustainable Transportation Plan. (12 Jan 2012)

ST2.8 Consider and participate in pilot demonstration projects for driverless technology, personal rapid transit, alternative fuels or vehicles as appropriate to the needs of the Installation and the Army. (DOL, ISRO)

ST2.9 Provide information and coordinate with the Air Quality goal lead to track emissions and implement initiatives to reduce transportation-related pollutants. (ISRO, DOL)

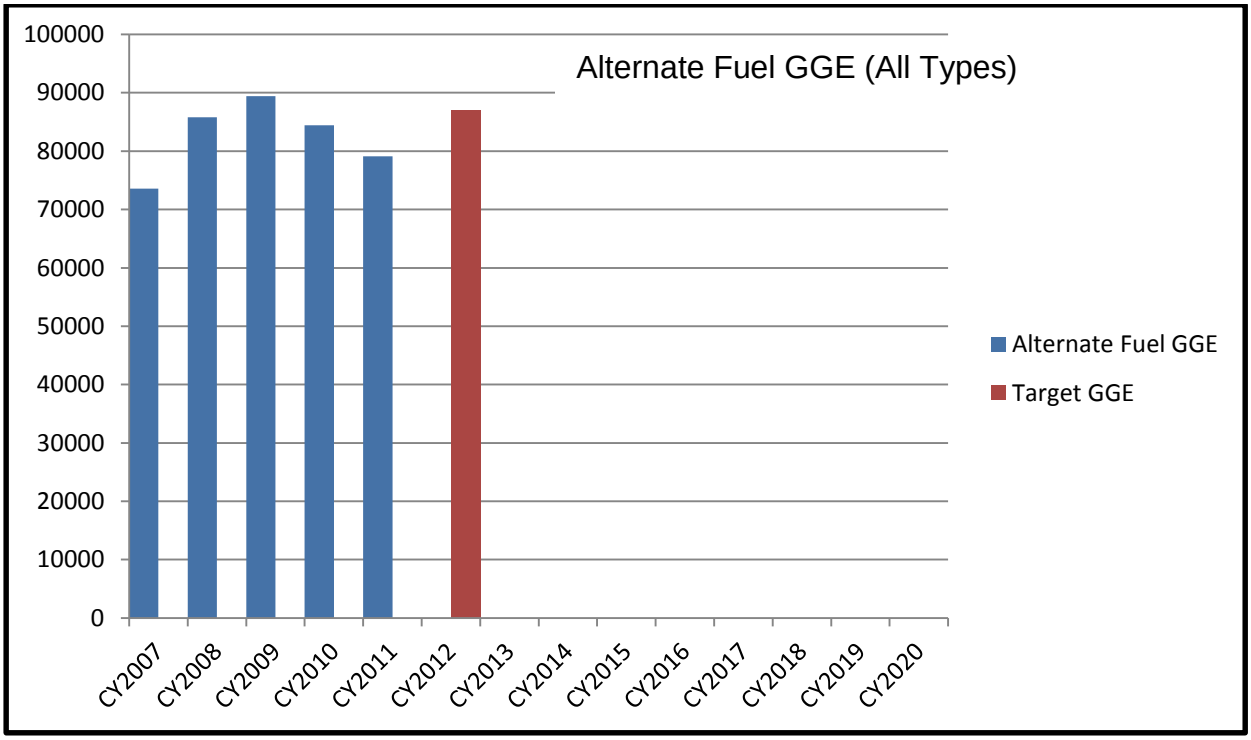
Participants involved: DOL, DPW, Sustainable Fort Carson, GSA, Southern Colorado Clean Cities Coalition

Objective ST3: Increase the use of renewable/sustainable alternative fuels in fleet AFVs as defined by GSA by 10% per year compared to a CY2007 baseline

Target by FY15: Increase alternative fuel use by 10% per year relative to the previous year.

Target by FY17: Increase alternative fuel use by 10% per year relative to the previous year.

Target by FY20: Increase alternative fuel use by 10% per year relative to the previous year.



Details on Measures for ST3 (See also ST2)

Measure: Alternative fuel purchased or used measured in Gasoline Gallon Equivalents (GGE) during the calendar year (CY) compared to the previous year.

Scope: The measure includes alternative fuels as defined by GSA [biodiesel, denatured alcohol, electricity, hydrogen, methanol, mixtures containing up to 85 percent methanol or denatured ethanol, natural gas, propane (liquefied petroleum gas), hybrid electric vehicles, fuel cell vehicles, advanced lean burn vehicles and any vehicle that would achieve a significant reduction in petroleum consumption]. The measure applies to non-tactical GSA fleet vehicles only. Renewable fuels produced cleanly and efficiently without petroleum are preferred over renewable fuels which are produced using large amounts of petroleum.

Source: GSA/DOL alternative fuel purchase and/or usage figures

Baseline: CY2007

Limitations: The measure is based on GSA vehicles in the post NTV fleet. Fort Carson may be limited in the numbers and types of vehicles available in the GSA inventory. With all federal agencies under similar requirements to reduce petroleum use and increase alternative fuel use, sustainable and alternatively fueled vehicles may be difficult to get through GSA until older vehicles are phased out.

Verification & Validation: DOL and GSA monitor fuel purchases and usage in most vehicles in this category.

Initiatives in support of Objective ST3 FY13/14/15

ST3.1 Request and analyze 2007-present GSA and DOL data on fuel type purchases by vehicle. (ISRO, DOL)

ST3.2 Develop electric vehicle charging infrastructure as appropriate and subject to availability of funds. (DPW/DOL)

ST3.3 Continue coordination with GSA and DOL to pursue access and use of more sustainable diesel fuel (biodiesel, clean diesel) subject to availability. (DOL)

ST3.4 Monitor sustainable biodiesel markets/standards at least annually. (DOL/DPW)

ST3.5 Conduct pilot projects such as Smith Electric Trucks subject to availability and/or funds. (DOL/DPW)

ST3.6 Promote bicycling, walking and other non-motorized forms of transportation continuously in order to decrease the total number of vehicles required from GSA. (ISRO, DOL)

ST3.7 Continue to work with Clean Cities to improve availability and access to alternative fuels within Fort Carson, the region and State. (ISRO/DOL)

ST3.8 Implement objectives ST1 (Anti Idling Program), ST2 (Rideshare Alternatives and Promotion), ST3 (Commuting by Bike and Walking), ST4 (Bicycle Sharing System), ST6 (Electric Vehicles and Alternative Fuels Infrastructure), ST7 (Transit Solutions Team), and ST9 (Commuter Express Bus Service/On Post Shuttle) as outlined in the proposed Fort Carson Sustainable Transportation Plan (12 Jan 2012).

ST3.9 Provide information and coordinate with the Air Quality goal lead to track emissions and implement initiatives to reduce transportation-related pollutants. (ISRO, DOL)

Participants involved: DOL, DPW, Sustainable Fort Carson, GSA, Southern Colorado Clean Cities Coalition

GGE Conversion Chart

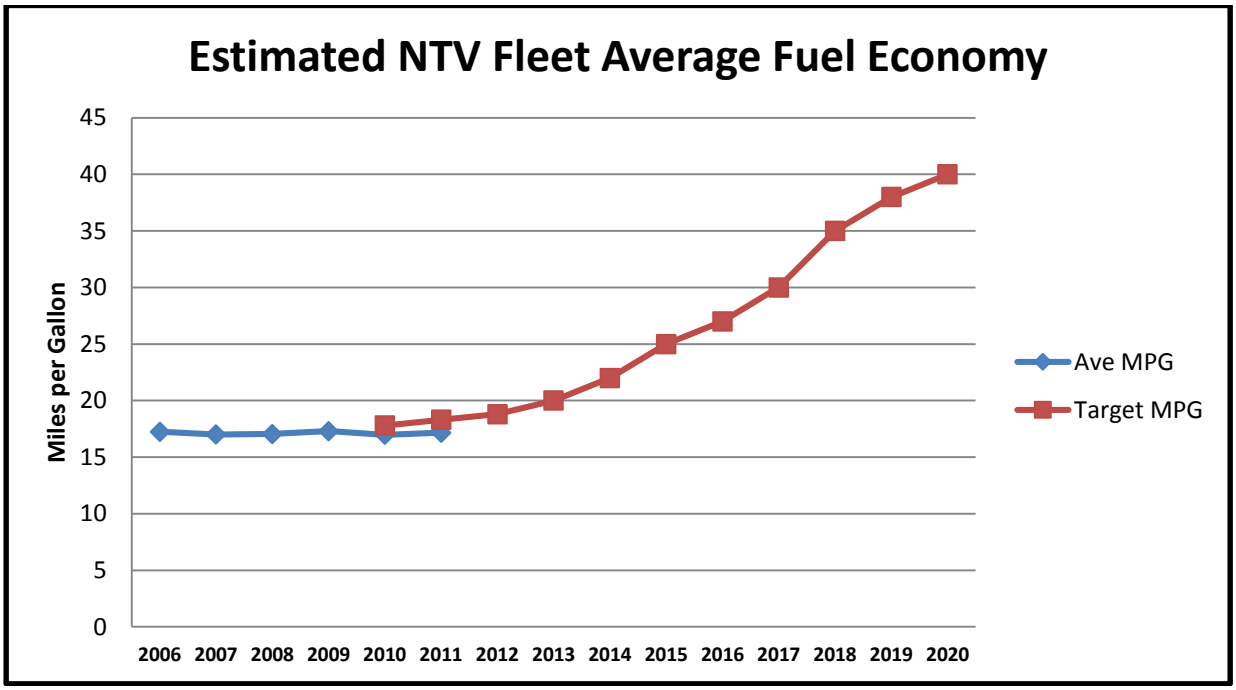
Gasoline Gallon Equivalents			
Fuel Type	**Unit of Measure**	**BTUs/Unit**	**Gallon Equivalent**
Gasoline (regular)	gallon	114,100	1.00 gallon
Diesel #2	gallon	129,500	0.88 gallons
Biodiesel (B100)	gallon	118,300	0.96 gallons
Biodiesel (B20)	gallon	127,250	0.90 gallons
Compressed Natural Gas (CNG)	cubic foot	900	126.67 cu. ft.
Liquid Natural Gas (LNG)	gallon	75,000	1.52 gallons
Propane (LPG)	gallon	84,300	1.35 gallons
Ethanol (E100)	gallon	76,100	1.50 gallons
Ethanol (E85)	gallon	81,800	1.39 gallons
Methanol (M100)	gallon	56,800	2.01 gallons
Methanol (M85)	gallon	65,400	1.74 gallons
Electricity	kilowatt hour (Kwh)	3,400	33.56 Kwhs

Objective ST4: Improve the estimated average fuel economy of the non-tactical fleet to achieve the equivalent of at least 40 miles per gallon by FY2020

Target by FY15: Improve estimated average fleet fuel economy to the equivalent of 25 mpg

Target by FY17: Improve estimated average fleet fuel economy to the equivalent of 30mpg

Target by FY20: Improve estimated average fleet fuel economy to the equivalent of 40 mpg



Details on Objective Target Graphs

Measure: Estimated average fuel economy equivalents in miles per gallon (mpg) for the GSA non-tactical vehicle fleet (cars and light duty trucks).

Scope: The measure includes GSA fleet vehicles only for which manufacturer / EPA fuel economy standards are available, with the exception that NEV vehicles received in FY10 were conservatively estimated at 30 MPG equivalent, reflecting an approximate 75% reduction from actual MPG equivalent due to their limited use capabilities.

Source: DOL/GSA list of NTVs; EPA estimated fuel economy (www.fueleconomy.gov)

Baseline: DoL's GSA fleet of FY2006

Limitations: The measure excludes heavy vehicles not receiving an EPA rating (heavy vans/trucks/buses): tactical/mission vehicles; construction vehicles; emergency response vehicles (fire); other vehicle fleets on Fort Carson (DFMWR, AAFES).

Verification & Validation: Sustainable Fort Carson verifies the information through DoL's GSA NTV list.

Comments: The original measure for this objective/target was based on a 3% annual improvement in GSA fleet fuel economy. A 3% improvement by 2011 would have equated to an average fuel economy of 18.3 mpg and by 2012 would have been 18.8 mpg. The objective/target and measure was changed with this goal update to take into account the 2009 Corporate Average Fuel Economy (CAFÉ) standards requiring a carmakers range of vehicles meet an average of 35.5 mpg by 2016 and the 2012 CAFÉ efficiency standards requiring 54.5 mpg for cars and light duty trucks by 2025.

Initiatives in support of Obj. ST3 FY13/14/15

ST4.1 Review organizational needs and optimize the size of the fleet. (DOL, NTV customers)

ST4.2 Target older and less efficient, petroleum vehicles for turn-in; request/replace with low-emission, high fuel efficiency vehicles. (DOL)

ST4.3 Add additional electric and plug-in hybrid vehicles to the fleet annually. (DOL, DPW)

ST4.4 Add renewable and/or sustainable alternative fuels such as biodiesel and ethanol, giving preference to those produced by cleaner, more efficient technologies. (DOL)

ST4.5 Consider adding compressed natural gas, propane or other fossil fuel-derived alternatives as a means of reducing emissions, reducing reliance on gasoline and providing alternatives while more efficient technologies are developed. (DOL)

ST4.6 Consider and participate in synthetic fuel, waste-to-energy or other unique, potential mobility fuels. (DOL)

ST4.7 Educate drivers about the negative impacts of unnecessary vehicle idling on air quality, fuel usage, fuel economy and cost through the implementation of a formal anti-idling policy, correlative educational campaign and compliance check as outlined in ST1 of the proposed Fort Carson Sustainable Transportation Plan (12 Jan 2012)
(ISRO/DOL)

ST4.8 Review how Fort Carson can measure transportation energy efficiency considering energy use per passenger mile rather than vehicle efficiency and implement passenger mile efficiency measures and goals when available. (ISRO)

ST4.9 Maintain awareness of proposed fuel efficiency standards for mid and heavy duty trucks/buses and determine establishing targets for these vehicles if considered appropriate. (ISRO, DOL)

ST4.10 Maintain awareness of NTV fleet fuel economy impacts (and benefits) on greenhouse gas emissions and fuel costs. (DPW, DOL, ISRO)

Participants involved: DOL, DPW, ISRO, GSA, IMCOM